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THE EDUCATIONAL MEDIA AND NATIONAL DEVELOPMENT.

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THE AUTHOR DEFINES EDUCATIONAL MEDIA AS INTELLECTUAL MULTIPLIERS, WHOSE MAIN CHALLENGES ARE TO CARRY EDUCATION TO UNDERDEVELOPED, UNDER-STAFFED, OR UNDER-FINANCED AREAS AT THE LOWEST COST, AND TO TRAIN TEACHERS AND TO PROVIDE ADULT EDUCATION. THE ROLE OF UNESCO AND THE U.S. IN DEVELOPING AND SPREADING MEDIA USAGE IS ALSO DISCUSSED. THIS ARTICLE IS PUBLISHED IN "UNESCO IN A DECISIVE DECADE", UNITED STATES NATIONAL COMMISSION FOR UNESCO, WASHINGTON, D.C., 20520. (MW)

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The Educational Media and National Development

By Wilbur Schramm

Education is now an accepted component of national economic and social plans. As Philip Coombs said in his first statement as director of the International Institute for Educational Planning, economists, bankers, and development planners have become aware that a society cannot sustain economic growth, or develop mature social and political institutions, unless it invests adequately and early in the development of its people's talents. Its new steel mills, dams, and jet airports can end up simply as "expensive status symbols," unless human resources are developed in balance with physical ones. This calls for education. As the importance of education has risen, so has interest in the educational media, and in what they can contribute to education and consequently to development. This is the topic we are going to explore briefly in the following pages. And let us begin by saying precisely what we mean by the term "educational media."

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WHAT ARE THE EDUCATIONAL MEDIA?

The educational media are simply the tools of public communication used for the purposes of education. For a seminar in Paris, I once classified these educational media in four generations.

First-Generation Media

These are the teaching devices that antedate the mass media—charts, maps, graphs, written materials, exhibits, models, chalkboards, demonstrations, dramatizations, and the like. Many of these are as old as teaching. Their distinguishing characteristic is that, unlike later media, they require no machine or electronic device. Therefore they are available to the developing countries wherever trained teachers are available.

Second-Generation Media

Printed textbooks, workbooks, and tests are examples of this group. All second-generation media depend on introducing a machine (the printing press) into the communication process to duplicate quickly and inexpensively man's writing and drawing. For over 300 years these second-generation media have been used extensively for education. Now certain new printing methods, such as phototypeset-

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ting and offset printing, are making them more easily usable in less industrialized countries. Textbooks are the most widely available of the educational media in the developing countries. Nevertheless, they are typically in short supply, and are often imported and therefore not completely adapted to local needs.

Third-Generation Media

The third generation includes photographs, slides, strip films, silent and sound motion pictures, recordings, radio and television. These depend on introducing a machine into the communication process to see and hear, or see or hear, for man. The first generation of media, it will be recalled, is as old as teaching; the second generation has been in use for more than 300 years; but the oldest of the third-generation media is only a little over 100 years, and the newest, about 35. The third-generation technology is well known in developing countries, but technicians and equipment are scarce. Films and radio are available in almost all such countries, and television in some. But projectors and teaching films are scarce in many countries; radio is used much less than it could be for education, and instructional television is beyond the experimental stage in only a few developing countries. It should be noted that such dramatic new "educational media" as the communication satellite are merely devices to extend the range of these third-generation media.

Fourth-Generation Media

The newest "media" include programed instruction, language laboratories, and electronic digital computers used in the tutorial process and in the swift retrieval of information. This generation of media depends in each case on communication between man and machine. Programed instruction, which "automates" a kind of self-teaching or tutorial process, is now for the first time being tried in developing countries. Language laboratories, which permit a student to practice language skills by comparing his efforts with an expert example, are likewise just beginning to come into use there. Computers used for the educational purposes indicated are still seen mostly in the industrialized countries.

This is a short catalogue of the impressive ranks of educational media, and something of their history: the very old teaching devices that require no communicating machines; the second generation of teaching devices that came into being more than three centuries ago, after man had learned to insert a machine into the communication process to duplicate what he had written; the third generation that has come into use during the last 100 years, when man could introduce a machine into the process to see and hear for him; and finally, the very new devices which depend on a student's communicating with something of the nature of a "teaching machine."

THE IMPORTANCE OF THE EDUCATIONAL MEDIA

The educational media have become so potentially important in the last few years because of their ability to act as multipliers of intellectual resources.

We sometimes forget what these multipliers have meant to us in the Western world. Without the printed media to multiply manyfold the places where writing could go and the number of people who could read it, we should never have had free public education or general literacy. Technical skills would never have been sufficiently widespread to bring about the

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Industrial Revolution, and political awareness would have been insufficient to make possible the people's revolutions and the growth of democracy in western Europe and America. Without the print, film, and broadcast media, the Western world could never have been able to distribute the technical and political knowledge which characterize modern civilization.

Wherever the multipliers have come into use in the Western world they have unlocked a storehouse of intellectual resources, and, in so doing, have tremendously accelerated the production of *new* resources. Thus when the elite shared their knowledge with larger groups through print in the 15th and 16th centuries, there followed the tremendous outpouring of new knowledge in the Renaissance. When literacy and education broadened so that more people could share the knowledge of the scientific elites in the 18th and 19th centuries, there came the great outpouring of modern science and technology. In all such cases, the sharing of intellectual resources made possible the creation of new resources, which in turn made possible profound social changes, most of which took the form of freeing the common man in one way or another, raising his status and potential, easing his hardships and opening new horizons to him.

And now the communication multipliers are being asked to do it again, on a larger scale, at a faster rate. They are being asked whether they can bridge the gap between the great educational needs and the scant resources of the new countries, and release the great energies pent up in these countries as they released the energies of western Europe in previous centuries. More specifically, they are being asked to help the new countries do more, educationally, for less; to fill in for untrained teachers; and to carry education where there are as yet no teachers and no schools.

Can they do it? Let us look at those three challenges.

To Carry Education Where There Are No Teachers and No Schools

Over large areas of the developing countries, people would go untaught if they had to wait for schools and teachers. And there is very little doubt as to what the educational media can accomplish in this respect: they can offer some opportunities even without schools. No country, of course, will long be satisfied to send its children to school only to radio or television. As soon as possible, schools and resident teachers will be needed. But teaching need not wait until these are available. In Italy the Telescuola teaches large numbers of children and adults who would otherwise be unable to study; and in the third year of this experiment a larger proportion of the Telescuola students than of the classroom students in the country passed the annual examinations for promotion. In Chicago, an entire junior college curriculum is offered on television, and the students (many of them homebound) have made a remarkable academic record. In many countries, radio has carried language teaching, scientific agriculture, and many other subjects to persons who would otherwise never have been able to study them. There is little doubt, therefore, that the media can be of real help in this way.

To Fill in for Untrained Teachers

Most developing countries are short of teachers, and all of them are short of well-trained teachers. In many countries the teacher has had little more training than the students. Since training and paying

teachers is one of the largest items in the bill for education, it is likely to be some time before adequately prepared teachers will be available in sufficient numbers. Therefore the question: what can the media do to help?

Here again we can answer fairly confidently on the basis of experience. They can share the *best* teaching, by broadcasting some of the best teachers, by filming experts and expert demonstrations, and by using the most experienced teachers to help prepare materials for others. The media can do some of the teaching which resident teachers are not trained to do. It is possible to offer a science class, for example, by radio or television or film, even though the school has no science teacher. Many countries have found it effective to offer correspondence courses where no teachers in certain subjects are available. Above all, the educational media can help to *upgrade* present teachers. In this country, for example, when we began to introduce foreign languages on a broad scale in the elementary school, we faced a shortage of elementary schoolteachers trained to teach foreign languages. But when we introduced an expert teaching elementary school foreign language on television, we noticed that the classroom teacher followed along, saw how the expert did it, was stimulated to do extra work on her own, and after a while usually became a competent teacher of the subject. Henry Cassirer in a talk at Purdue told of a science teacher in Oregon who "wrote to the television teacher and said: 'This year I'm not going to take you in my class any more, because I've watched you for two years and I think I can do the same things you do and I don't think I need you any more.' To my mind," Cassirer added, "this is exactly as it should be!" This is *indirect* teacher training. From dozens of countries, from Sarawak to the United States, we could cite examples of successful uses of the media to train and upgrade teachers *directly*. Therefore, there is little doubt that any developing country can profitably use the media for teacher training, both inservice and preservice.

To Help the New Countries Do More Educationally for Less

This is the key question. The projected costs of developing education are enormous. The African Governments, meeting at Addis Ababa in May of 1961, estimated that the cost of the present 5-year plan for raising primary enrollments from 40 to 51 percent, secondary enrollments 3 to 9 percent, in Africa alone, would be about $4.15 billion. The Asian Governments, meeting at Karachi, the Middle East Governments at Beirut, and the Latin American Governments at Lima and Washington, came to comparable conclusions about educational costs. No one has dared to estimate the total cost of educational development in the next 20 years, but if the educational media could save only a tiny fraction of it they would make a most noteworthy contribution.

But we have been talking about some rather expensive devices. Instructional television, for example, is not something one orders like a new projector or a bundle of chalkboard erasers. Are we talking about saving money or spending more money? Can the educational media really do more for less?

The answer to this question cannot be so clear-cut as to the first two questions. There is no doubt, of course, that the media can help the new countries do *more*. We long ago proved in our own schools that the educational media could enrich the

curriculum, improve teaching, and offer demonstrations and other learning experiences which would otherwise not be available. But whether they can do it *for less* depends partly on what the new countries are willing to do about their own educational systems. If they insist on building a string of Durhams and Cambridges, of Lycées and boarding schools, or, for that matter, of Choates and Harvards, across their countries, then they are unlikely to save much money by using the educational media. In our countries, we have never used the educational media (except, possibly, the textbook) at their full potential because we have added them on, almost as an afterthought, to a system already designed and hardened. To the extent that these countries imitate us, therefore, the media are not likely to help them do more *for less.*

But if they are willing to take a fresh, imaginative look at their educational needs and resources, then the outcome may be somewhat different. Suppose a country starts new, knowing of the existence of the new media, estimating the resources it will have, defining its needs not in terms of another country's system but in terms of its own goals and its own people. And suppose it then designs the best system it can to fit its own needs. Undoubtedly, this will be unlike any existing system, although it may incorporate elements of many systems. We wager that the resulting system, whatever it is, will make prominent use of the educational media. And beyond the fact that it will certainly come closer to the needs of the country than an imported or imitated system, it may also do more for less: it may make possible a real saving in money. Undoubtedly, problems like this will be the food of discussion at the new International Institute for Educational Planning.

THE MEDIA AND ADULT EDUCATION

It is in adult education that the educational media make one of their most striking contributions. In most developing countries there is no such sharp distinction between child and adult education as there is in our country. The whole country seems to be learning—indeed, must learn, if development is to go forward. One of the more attractive reports to come out of developing China is that everyone *hsueh hsi*—studies. At every level in a new country, there are new skills to be taught, questions to be answered, people to be persuaded, decisions to be made and talked over. At every level, therefore, there is need for an enormous amount of information. Whether it comes through schools or through media or organizations outside the schools, still it is concerned with new skills, new understandings, new values.

The common people of a developing country are being asked to do nothing less than change their lives! They are asked to modernize the agriculture their families have practiced for centuries, improve their health practices, learn to read, go to school or send their children, learn mechanical and mathematical skills, move from barter into a money economy. They are being asked to reconsider long and strongly held attitudes toward such things as killing living creatures, hard work, fatalism toward life and destiny, family size and organization, caste and status. They are being asked to take part in governing the country. Daniel Lerner tells in *The Passing of Traditional Society* what a traumatic experience it was for a Middle Eastern village for a radio receiver to be brought in, and for the men of the village to hear the national leader inviting them, for the first time in all history, to participate in national government!

What the common people learn and decide in the villages is therefore just as important as what the leaders learn and decide at the center. It is true that a group of economic planners and administrators must sit in seats of importance, receiving information and making national decisions on how much capital shall be invested in heavy industry, how much in schools, what dams shall be built, what taxes shall be collected, and so forth. But a vastly greater amount of information must be absorbed by the ordinary men, women, and children of a developing country, and a vastly greater number of decisions must be made by these ordinary people if the central decisions are to have meaning and force. And the more a country depends on persuading rather than coercing its people, the more it must depend on information and teaching. In this respect the media, in school or out, can be of the greatest help.

WHAT THIS MEANS TO DEVELOPING COUNTRIES

There is no doubt in the mind of anyone who has looked hard at this question that the educational media can multiply enormously the educational resources of a developing country. This is true of the whole gamut of media, from the first through the third and even into the fourth generation, as we listed them earlier. "Is there in fact today," asked Henri Dieuzede, research chief of the French Institut National Pedagogique, "any other human undertaking, beside radio and television, which appears capable of helping a society in transition to cross so quickly and effectively the difficult threshold of the second half of the century: of providing a modern education on a world-wide scale?" He was perhaps paying insufficient honor to what films might accomplish; and at least one of the newest media—programed instruction, which promises to be one of the most effective means of self-teaching—should be in his list. But the basic point holds: without an effective use of multipliers, it is unlikely that the developing countries can even come close to their goals of educational development in the next decades.

This in turn means two things to the leaders of the developing countries. For one thing, they must be willing to invest in the media. The record of the developing countries is not particularly good in this respect. As a matter of fact, the Communist countries have typically paid more attention than the non-Communist ones, to building up the media. These latter are willing to invest in heavy industry, somewhat more grudgingly in schools, and hardly at all in media. Ithiel Pool tells what one Asian country has done about the radio system which has been its chief tool for reaching the villages. In this particular country, Pool said,

> There are two radios per 1000 persons. . . . The First Five Year Plan allocated two-tenths of one per cent of outlays to developing of broadcasting. It allocated 14 times as much as that to posts and telegraphs. It allocated about 60 times as much to education. But that was only the Plan. Across the board, actual outlays of the five years slipped 15 per cent below the Plan, but outlays for broadcasting were allowed to fall short by 45 per cent. . . . In the Second Five Year Plan development of broadcasting was given no greater role. . . . In the Third Plan it is cut down to one-tenth of one per cent.

Furthermore, the possibility of using the educational media challenges the new countries to a certain boldness in dealing with their educational budgets, and a certain imaginativeness in making their educational plans. Developing the educational media, or the mass media in general,

is not a costly thing compared to the total cost of education, but it still requires investment at a sufficient rate to reach a "critical mass." For example, a little television is a costly thing, but television used in a sufficient number of schools and for a sufficient number of students and adult learners may save money. Furthermore, as we have said, the potential of the educational media challenges the new countries to fresh thinking about the kind of education they want and can afford. A timid, imitative approach is unlikely to get the best out of the media, or the most useful education to the children of the country. National development is a time for bold thinking and future orientation, in education as in other things.

WHAT IT MEANS TO US

The need of the developing countries for educational and information multipliers presents a special challenge to countries like this one, because we are the chief custodians of experience with the new media. Most of the research on instructional television has been done here. There were upwards of one hundred experiments with programed instruction in this country before any considerable development took place elsewhere. Some of the largest manufacturers of media equipment are here. Therefore, we are in position to share our knowledge with the new countries, and indeed are obligated to do so.

But we must observe a certain humility in sharing what we have. A machine—a projector, a television transmitter, a radio receiver—can be transferred to another culture with little or no change. But the *use* of such machines presents a different problem. We can help the new countries a great deal in learning *how to use* the educational media, but we must be restrained in telling them what to use the media *for*. We don't know how many of our instructional films, our textbooks, our instructional programs, can be used without substantial change in, say, an African or an Asian culture, but we can assume that the number will not be large. Any country wants its educational materials and system to fit its own culture. Nigeria wants its reading texts to deal with Nigerian children, not with Dick and Jane; its arithmetic texts to be used based on African, rather than European or American examples. The media cannot wag the culture. It is a new country's job to decide what it wants to teach. It is our part to find out enough about the culture and the economics of the country so that we can give sensible advice about the use of the educational media. To put it another way, our task is to help the people of the new countries, when asked, to learn to use the educational media in their own way (not our way), for their own purposes (not ours) and their own audiences (not the ones we are familiar with). Much of the trouble with giving advice in this area would be avoided if these simple restraints were observed.

WHAT IT MEANS TO UNESCO

Inasmuch as we are speaking under the auspices of the U.S. National Commission for UNESCO, it may be proper to say in conclusion a word about the meaning to UNESCO of educational media in the developing countries.

UNESCO occupies a responsible position in this situation. It is a nerve center, into which flows—or should flow—information from both the more highly developed countries and the new countries on their experiences with the media. Thus

UNESCO is a kind of educational medium itself, and in position to multiply the intellectual resources on this subject. What one developing country finds out may well be of use to another. What is available in a developed country may be something that a new country needs. UNESCO is in position to know where experts and advisers are available, and to send them, on request, to developing countries, and through its training grants to send people from the developing countries where they can best learn about the media.

As a matter of fact, UNESCO has been doing a rather good job in this respect, and the flow of experts which it has supplied to the developing countries of Asia, Africa, and Latin America is a case in point. A second example of its helpfulness is what the organization has done to make known the technique of the radio or television farm forum. This originated in Canada. UNESCO early saw the importance of such forums as vehicles of information and decision-making for rural people. It therefore asked Canada to evaluate its experience. The results of this evaluation were published, the method of conducting the forums was made known, and as a result the forums were tried in a different pattern in France and in Japan, made a great success in India, and are now being used in a number of other countries. In each case they are proving the power of combining mass media with local discussion, and this generalized principle is one which UNESCO is able to pass on to developing countries. A third example of UNESCO's work in this field is the two workshops on programed instruction held last summer, one in Africa, one in the Middle East, to give the educators of these regions a chance to study and evaluate the new method. If the method proves promising, further steps will be taken to introduce it.

We must mention that UNESCO faces one organizational problem in dealing with these devices, a problem that is generic to the nature of educational media. These media are both educators and mass media. The media specialists of UNESCO are in the Department of Mass Communication, whereas the educational specialists are, of course, in the Department of Education. Up to this point, most of the help with instructional radio and television has come from the Department of Mass Communication; most of that on programed instruction and textbooks, from the Department of Education. As the educational media grow in importance, this will become more of a problem, and some kind of administrative adjustment—something of the nature of a task force, or project staffs, or some other arrangement to make sure of ample cooperation and focus on the problem—will probably have to be made.

It must be said, however, that UNESCO has been aware for some time of the potency of these media, and has shared the vision which Robert Le Franc, of the graduate school at St. Cloud, expressed in this way:

> We need have no fear that these countries, at least, will make the same slow pilgrimage to the temple of culture which has taken European countries some hundreds of years. On the contrary, they should undertake forced marches, and fight ignorance and illiteracy with modern methods and techniques, not with those of Socrates, Montaigne, Rousseau, and Jules Ferry.

Advisory Role of the Commission

The primary role of the Commission is to advise the Government of the United States in matters relating to UNESCO and in all matters referred by the Secretary of State. The Commission at its plenary sessions makes recommendations on the UNESCO program and budget after careful consideration and review by technical committees (education, natural and social sciences, mass communications, and cultural affairs).

Looking toward the Twelfth General Conference of UNESCO at Paris scheduled for November–December, the various technical committees of the Commission met in Washington on April 26–28, 1962, to review in considerable detail the existing program of UNESCO and consider proposals for the future. The Commission in plenary session approved the proposed increase of 22½ percent in the UNESCO budget [1] as reasonable for the continued normal growth of UNESCO. It also favored substantial increases in the U.N. Special Fund and Technical Assistance Program as consistent with the Decade of Development, but repeatedly cautioned that this new emphasis should not lessen UNESCO's attention to its traditional role of promoting intellectual cooperation. The Commission also strongly urged that UNESCO set definite priorities among its manifold activities to provide a greater concentration of effort for the more important tasks facing the organization.

Many of these general and specific recommendations were incorporated by the Department of State in the instructions prepared for the U.S. delegation to the General Conference. In addition, several members of the Commission participated in the work of our delegation. The Chairman of the Commission, George Allen, was appointed Vice Chairman of the U.S. delegation and was acting Chairman during the latter part of the Conference. Two Commission members were appointed alternate delegates and a third was named Special Adviser. The Executive Secretary of the Commission also served on the delegation.

The technical committees and the Commission met again in Washington on April 24–26, 1963, to develop recommendations on the UNESCO program for 1965–66. These sessions marked the beginning of an intensive effort by the Commission to concentrate its attention on major program aspects and to submit its recommendations in the early stages of UNESCO's program development cycle. The work of the Commission at this April 1963 meeting will not have its outcome until the 1965–66 program is finally established at the Thirteenth General Conference in the fall of 1964.

As a major recommendation, the Commission called for closer integration of the natural and social sciences within UNESCO to better utilize resources for

[1] The 12th General Conference of UNESCO adopted a $39 million budget in December 1962, representing a 20 percent increase over the previous biennium.

international development. Also urged was the establishment of an Institute for Natural Resources Analysis to provide an integrated approach to the problems of development and help the less developed countries identify and analyze their resources problems. The Institute would identify and formulate regional and national resource development problems to be analyzed on an integrated approach by all specialists concerned. It would also serve as a clearinghouse for information on resource development technology, including social and cultural aspects, and provide training in methods of analysis and research on natural resources problems.

In the field of scientific documentation, the Commission noted that UNESCO was particularly suited to assist the less developed countries in setting up information services in science and technology. As regards current science activities, the Commission recommended increases in the budget for hydrology, oceanography, documentation, science education, and science cooperation and smaller outlays for cell biology, brain research, and space sciences.

In the field of education, the Commission approved the idea of a sustained international effort to promote literacy among nations of the world, but cautioned that this effort must be part of a broad undertaking involving other international organizations concerned with the development of human resources. The Commission also felt that adult literacy efforts in each country should be integrated into a well-balanced program of educational development. Emphasis was also placed on the need for having adequate resources and competent teachers available.

On the subject of cultural activities, the Commission stressed that the current emphasis on the U.N. Decade of Development should not cause UNESCO to abandon its basic purpose of promoting better international understanding through cultural exchanges. With the impending conclusion of UNESCO's Major Project on Mutual Appreciation Between the Orient and the Occident, the Commission recommended that selected aspects of this important activity be continued within the regular UNESCO programs.

Turning to Mass Communications, the Commission reaffirmed its belief that the mass media can and will play a significant role in the U.N. Development Decade and urged greater financial support for UNESCO's work in developing mass media in Asia, Africa, and Latin America. The Commission sounded a cautious note with respect to the cost and use of satellites, and made clear that these new means of communications offer no swift and easy way to wipe out ignorance on a global scale. The Commission also urged UNESCO to undertake a comprehensive pilot project in one country to test the application of educational technology in that country's development program.

The Commission reaffirmed UNESCO's support of international nongovernmental organizations where it is clear that needed funds are justified and not otherwise available. The recommendation made clear that these organizations should make every effort to become self-sustaining and whenever feasible should be supported by UNESCO through contracts for specific services rather than by grants.[2]

All of these recommendations were submitted to the Secretary of State by the Chairman on May 10, 1963. They were accepted in large measure by the Department of State and were used in the U.S. Government presentation to UNESCO re-

[2] The complete report of "Recommendations for the UNESCO Program and Budget 1965–66," submitted to the Department of State, is included as Appendix I.

garding our view of what the 1965–66 program should be.

On a separate special problem concerning UNESCO publications policy, the National Commission approved at its October meeting in Pittsburgh a statement finalizing a study initiated early in 1962.[3] In transmitting the statement to the Secretary of State, the Chairman characterized it as one of the most careful actions ever taken by the Commission. The technical committees, an *ad hoc* working group, the Executive Committee, and finally the Commission in plenary session devoted long hours of study and deliberation to it. Concerned with a situation where the great number of member states inevitably have wide and divergent views as to the purposes of UNESCO publications, the National Commission emphasized the need for competence, objectivity, and clear identification of authorship. Additionally, the Commission recommended creation of a Publications Advisory Board within the UNESCO Secretariat to ensure that manuscripts meet agreed criteria.[4]

[3] The text of the report will be found in Appendix II.

[4] On the basis of a report prepared by a special Publications Committee, the Executive Board of UNESCO at its 65th session in April 1963 adopted a resolution which incorporates the essence of four recommendations made by the U.S. National Commission for UNESCO. The Executive Board added a proviso that publications should avoid passages likely to cause offense to member states. The UNESCO Secretariat Publications Board has been reconstituted to assist the Director General in implementing the new policy. The new criteria represent the first policy guidance on UNESCO publications ever provided by a UNESCO governing body.

Implementing the UNESCO Program

Since its inception the Commission has helped create in the United States a better climate of international understanding and appreciation of foreign cultures in line with the objectives of UNESCO. The Commission has endeavored to do this by holding national conferences every 2 years in line with its mandate. Representatives of nongovernmental organizations are invited to send representatives.

• The Eighth National Conference "Africa and the United States: Images and Realities," held in Boston in October 1961, in cooperation with Boston University, explored in depth and details the social, cultural, and educational changes of Africa. During 1962 many of the delegates undertook followup activities with the help of the Commission. Among such activities were conferences in Colorado, Connecticut, Illinois, Minnesota, New York, and other parts of the country on the general theme of the Boston Conference. To help plan these local conferences, the Commission distributed hundreds of copies of the 212-page background book of the Boston Conference, as well as of the *Final Report.* The Commission prepared a *Blueprint for American Community Programs on Africa* with the help of the Foreign Policy Association and the Women's Africa Committee of the African-American Institute. The National Commission also published Films on Africa, a list of selected films useful for group showing.

• The Ninth National Conference held at Chicago in October 1963 in cooperation with the Chicago Council on Foreign Relations featured the theme of "The New Europe and the United States: New Directions." About 1,200 participants from the Chicago area and other parts of the country attended the plenary sessions and symposia devoted to the fundamental changes now taking place in Western Europe and their relevance to the United States.

Following the keynote address by René Maheu, the Director General of UNESCO, some 50 distinguished American and European speakers set forth significant developments in Western European and Atlantic relations.[1]

Events related to the Conference and arranged by the Chicago Council on Foreign Relations included a 1-day session on the New Europe theme for students and faculty from 250 Chicago-area high schools; a special symposium on contemporary European painting at the Chicago Art Institute and a concert of Contemporary European music by the Chicago Symphony Orchestra.

• The National Commission initiated in 1962 the first in a series of seminars in support of the activities of UNESCO. The first seminar, organized by Dr. Luther Evans, former Director General of UNESCO, brought together at the Airlie

[1] The final report of the Conference will be available early in 1964.

Foundation in Virginia, 30 experts from universities, foundations, and the Government for a concentrated study of the implications for Africa of the new educational media, discussed by Dr. Schramm in a preceding chapter. Foremost among the recommendations resulting from the seminar was a call for better coordination of activities between Government and private agencies in the field of mass techniques of education. A second seminar is being planned on the role of nongovernmental organizations in UNESCO.

In line with its consistent interest in international understanding, the Commission also sponsored a meeting on February 8, 1963, for textbook publishers and writers in cooperation with the National Council for the Social Studies and the American Textbook Publishers Institute on UNESCO's Major Project on Mutual Appreciation Between the Orient and the Occident. One aspect of this project concerns the improvement of textbooks. The meeting attended by 42 publishers, writers, and consultants made several recommendations, including a high-level curriculum study that will set clear objectives in the teaching of non-Western cultures. A report of the meeting was distributed by the cosponsoring organizations. Further meetings of experts are planned in 1964 under the joint auspices of the Commission and the New York State Education Department on related aspects of teacher training and curriculum planning in non-Western cultures.

• In the cultural field, the National Commission helped bring to the United States and send on a national tour in 1962 the King Tutankhamen treasures, a loan exhibit from the Department of Antiquities of the United Arab Republic. The "King Tut" treasures were for the first time sent outside the United Arab Republic to publicize UNESCO's efforts to save the Nubian monuments along the Nile. This exhibit has been shown at the National Gallery of Art, Washington, D.C.; University Museum, Philadelphia, Pa.; Peabody Museum of Natural History, New Haven, Conn.; The Museum of Fine Arts, Houston, Tex; Jolsyn Art Museum, Omaha, Nebr.; Oriental Institute, Chicago, Ill.; Seattle Art Museum, Seattle, Wash.; California Palace of the Legion of Honor, San Francisco, Los Angeles County Museum, Los Angeles in California; Museum of Fine Arts, Boston, Mass.; City Art Museum of St. Louis, St. Louis, Mo.; Walters Art Gallery, Baltimore, Md.; and Cleveland Museum of Art, Cleveland, Dayton Art Institute, Dayton, and Toledo Museum of Art, Toledo, in Ohio.

• As a further contribution to the UNESCO Major Project on Mutual Appreciation Between the Orient and the Occident, the National Commission assisted the Art Department of Indiana University in circulating an exhibition of about 30 paintings by Senake Senanyake, a 12-year-old gifted artist from Ceylon. His original paintings have won high praise in several cities.

• The National Commission collaborated in the International Poster Contest sponsored by UNESCO "for designs which make a striking appeal on behalf of international understanding and cooperation." To select U.S. entries for the competition, the National Commission organized a nationwide contest. The best entries from the 530 posters received from 34 States and the District of Columbia were selected by a jury consisting of René d'Harnoncourt, Director of the Museum of Modern Art; Leo Lionni, Art Director of Fortune Magazine; and Norman Todhunter, a well-known artist and illustrator. The winners were: George Giusti of

New York; Joe Simboli of Philadelphia; Antonio Frasconi of South Norwalk, Conn.; Hubert W. Leckie of Washington, D.C.; James Cross of Sherman Oaks, Calif. and Gary D. Friedland of Forest Hills, N.Y.

• The National Commission submitted 89 photographs from various American school children for the World Exhibition of Photographic Works by secondary school pupils sponsored by the Japanese National Commission for UNESCO and the Photographic Society of Japan on the theme of "Life of Peoples of the World." American entries won first and sixth prizes. The National Commission also sponsored the American participation at the 2d and 3d World Education Art Exhibition in Seoul, Korea, and 7th and 8th World Schoolchildren's Art Exhibition.

• The National Commission cosponsored with the Italian National Commission for UNESCO a book of reproductions of the paintings in the Bernard Berenson collection at his villa near Florence. Reproductions of this unique collection have never been previously published in book form.

Public Liaison With Organizations and Information Activities

A primary function of the Commission is to inform the American public of the work of UNESCO and stimulate activities on the part of voluntary organizations which will further United States participation in the work of UNESCO and bring about better understanding of United States efforts in international aspects of education, science, and culture.

• Organizations belonging to the Commission, as well as former organizations and other national and local groups, often call on the National Commission for pamphlets, discussion materials, films, exhibits, and speakers. A report for a 6-month period (April–September 1962) showed that 34 such organizations asked the National Commission for assistance in planning programs. Indicative of the interest in UNESCO is the fact that more than 125 circles of the Women's Society of Christian Service of the Methodist Church devoted meetings to UNESCO in the fall of 1962 in 24 States. Several other large organizations included UNESCO in their adult study programs. The Commission also helped sponsor a regional conference on May 24, 1963, at Chicago Teachers College for representatives of nongovernmental organizations.

• The National Commission sponsored an exhibit at the United Nations Pavilion at the Seattle World's Fair, and provided speakers, including the Chairman, for a special UNESCO Week June 24–30. This special event attracted hundreds of visitors for talks on UNESCO and special programs of folk music. UNESCO was also featured on local radio and TV stations. Smaller exhibits were also supplied in 1962 to several county fairs, including Memphis Mid-South Fair in Tennessee; Santa Clara Fair, the California State Fair at Sacramento, and the San Mateo County Fair in California; and Columbus County Fair in Ohio, as well as several conferences throughout the country.

• The Pittsburgh meeting of the National Commission in October 1962 featured a series of panel discussions which related international education to the interests of American colleges and universities and of community organizations. The program was arranged in cooperation with the Regional Council for International Education and covered such topics as "Broadening Academic Horizons," "Training for International Service," and "The American Citizen and International Understanding." Representatives of the 30 colleges and universities belonging to the Regional Council joined with Commission members in the panel presentations and ensuing discussions. Closer relationship with colleges and universities will continue to be a major concern of the Commission.

• To inform the public of UNESCO activities, the Commission publishes a monthly newsletter. Other publications in 1962 and 1963 include *UNESCO in the News*, an account of UNESCO activities as seen in the American press; *Questions*

and Answers about UNESCO, a pamphlet on the role of UNESCO which is widely used by organizations; *The American Interest in . . . UNESCO*, an illustrated pamphlet which was placed on sale by the Government Printing Office as well as several reprints of articles on UNESCO.

• National Commission members and the staff cooperated with the press, various publications, and radio and television in informing the public on the general and specialized activities of UNESCO. Several Commission members have written articles for general and specialized publications. Several have appeared on TV panels and spoken to community groups.

• Another indication of public interest is reflected in the volume of mail. The staff answered queries from more than 9,000 persons in 1962 for information and documents on the UNESCO program on Human Rights, not including congressional requests for information.

Promotion of Human Rights

Each year in December, in line with a request by UNESCO, the United States joins with other nations of the free world in observing Human Rights Day (December 10), commemorating the anniversary of the adoption in 1948 of the Universal Declaration of Human Rights by the U.N. General Assembly. In the same week there also follows the anniversary of the United States Bill of Rights (December 15). For the last several years the National Commission has promoted annual observance of Human Rights Week (December 10–17) to call attention to the close parallel between these two documents.

● Human Rights Week observances were marked in 1962 by proclamations by the President and several Governors of States, as well as statements by heads of Federal agencies. The National Commission assisted in observances throughout the country by mailing out, upon request, posters, guidebooks, and flyers to schools, libraries, and church and civic groups. The Commission also sponsored a 1-minute TV message by the Attorney General which was distributed to major TV stations and networks.

● As part of the planning for national observance of the 15th anniversary of the Universal Declaration in 1963, the Commission called a meeting of nongovernmental organizations which resulted in the publication of a guidebook for community action sponsored by 34 national voluntary organizations. The handbook served as the basis for planning Human Rights Week observances in at least 19 communities. In addition, the Commission marked the anniversary with appropriate materials and a new poster highlighting the significance of the Universal Declaration. At the request of the Commission, Howard Hanson composed a choral work setting to music the preamble of the Universal Declaration. His work is scheduled to receive its world premiere by the National Symphony Orchestra at a concert in Constitution Hall on December 10. Special exhibits on the theme of Human Rights are scheduled at the National Gallery of Art in Washington, the Boston Museum of Fine Arts, the Kansas City Museum of Fine Arts, and the Cleveland Museum of Art.

Another highlight of Human Rights Day in 1963 will be an exhibit in the National Archives building of drafts of Human Rights documents in which the late Eleanor Roosevelt worked during her association with the United Nations as well as other manuscripts and papers illustrating her interest in Human Rights. The exhibit is to be opened to the public by Ambassador Adlai Stevenson.

Recommendations for the UNESCO Program and Budget 1965–66

EDUCATION

Adult Literacy

The United States National Commission for UNESCO strongly supports the idea of a sustained international effort designed to bring about literacy among nations of the world. It further believes that the achievement of this goal will be greatly aided by efforts directly to educate the adult citizens who now shape or influence the social policies of their countries and whose capacity to produce determines the economic base of their society.

The National Commission is aware of the fact that literacy has many levels ranging from a single capacity to read and write one's name to an ability to absorb the written and printed materials required for full and responsible citizenship. Since only the highest level can serve as the ultimate aim, and since it must eventually be achieved in many different societies, most of which are now nonliterate or semiliterate, the task ahead is a long, difficult, and complex one.

The National Commission therefore recommends that UNESCO, including national or international agencies with which it works, should be guided by the following policies:

1. An adult literacy program should be considered to be an essential element in the development of a nation. The motivation which leads men and women to want to be literate is intimately related to their political, economic, and social aspirations.

Learning to read and write must be a meaningful activity, not merely a mechanical exercise. This fact suggests that UNESCO literacy efforts should largely be a matter of rounded development programs jointly undertaken with such international agencies as the Food and Agriculture Organization (FAO) and the World Health Organization (WHO), and others having similar missions.

2. An adult literacy program should be conceived as a central and integral part of the total adult educational activity of a nation. Some countries have complex needs for education, while others can be satisfied, at least for a time, with simpler approaches.

But literacy merely makes further learning possible and lifelong learning is essential to the modern man or woman whether it be on the farm, in the factory, in the home, or in parliament. Therefore an adult literacy program cannot be the sole focus of educational effort, a fact which should be recognized by every nation as it designs its balanced program of educational development.

3. Adult literacy programs should be initiated and expanded as rapidly as adequate resources can be made available and competent teachers can be provided. It must be recognized that this field of educational activity is so important as to require the taking of occasional calculated risks in the hope of achieving both immediate impact and long-range educational development. It must also be

remembered that the failure of a program leads to disillusionment and deters the later development of sounder activities.

4. One valuable function of UNESCO is to collect, organize, and make widely available present knowledge as to the best methods and techniques for adult literacy so that future practice can increasingly be based on the fruits of past experience.

5. Another important function for UNESCO is to stimulate and support further basic research concerning adult literacy education. This research will involve an exploration of the administrative, curricular, and motivational aspects of literacy programs. But other basic studies need to be made of such technical matters as eye movement, regression, spaced introduction of new words, and phonics as these matters apply to adult readers. Both the existing and the future technology of literacy learning must be considered, for many kinds of languages in many kinds of alphabets and pictographic representations. While an inspired and dedicated teacher can achieve excellent results in individual situations, mass literacy programs can be carried forward most effectively by establishing fundamental methods which can be applied by many teachers.

6. The teaching of reading and writing whether to a child or an adult is but the first step in making him literate. To support the use of his skills and to enable them to be used to his advantage and that of his society require those essential but complex resources, including such things as libraries, bookstores, newspapers, magazines, to be found in every literate society.

While the initial thrust of effort must focus on the teaching of basic skills, the National Commission hopes that even now the larger dimensions of the problem may guide the efforts and fire the imagination of those who direct the UNESCO program.

School Construction

NOTING, the growing interest of the developing countries in problems of school construction; and

NOTING ALSO, the establishment under UNESCO of regional centers at Bandung, Khartoum, and at some point to be selected in Latin America, for the study of school construction problems; and

RECOGNIZING, that the construction of school buildings will require the use of many billions of dollars,

The United States National Commission for UNESCO endorses and approves the interest which UNESCO has taken in the problems of school construction.

The National Commission Recommends:

1. That UNESCO recognize that the major means by which it can render a service in this field will be through national agencies dealing with school construction programs, and that it encourage the development of such national agencies and give them all possible support.

2. That no additional regional centers to be concerned with school construction problems be established at present. Efforts should be directed for the present to exploring the potentialities of the three centers whose establishment has been approved.

3. That UNESCO establish an office or unit within its Department of Education as a first step toward providing assistance in this area on an international basis.

4. That UNESCO should also explore other ways of helping developing countries meet their needs in this area, for example, through publications and conferences. (Considerable discussion was given

to the question of recommending to the Department of State that UNESCO consider convening in 1965 an International Conference on School Facilities in the United States. It was felt that this matter could be more properly explored by the Department and Staff.)

Subventions and Contracts With International Nongovernmental Organizations

NOTING, that in the area of education subventions involve the annual expenditure of only $34,000, presently distributed among eight organizations, representing only a small amount of supplementary assistance relative to subventions in the area of science and culture;

NOTING ALSO, the importance of subventions as a method, the need for determining their use in each individual case, and the importance of any change in policy being gradual;

NOTING FURTHER, the growing importance of contracts as a means of obtaining specific services from nongovernmental organizations;

CONVINCED, of the continuing need for securing maximum cooperation from international nongovernmental organizations to advance the purposes of UNESCO;

RECOGNIZING, that many of the purposes for which subventions are granted to international nongovernmental organizations are purposes for which financial aid is not generally available from other sources;

AND RECOGNIZING ALSO, that additional organizations might merit supplementary support in terms of subventions;

The National Commission urges the Department of State:

1. To support the UNESCO practice of granting subventions to international nongovernmental educational organizations when it is clear that needed funds are not available to these organizations from other sources, and where organizations have proper justification for their requests;

2. To request beneficiary organizations to make every effort gradually to increase their own share to the point of becoming self-sustaining as soon as possible;

3. To request the Secretariat of UNESCO to publish a summary and an appraisal of the activities of those organizations to which UNESCO has granted subventions;

4. To review the criteria established for selecting recipients of subventions from amongst those which apply for supplementary aid; and

5. To subscribe to the policy that UNESCO support should take the form of contracts for specific services whenever feasible providing funds are made available to fulfill the purposes set forth in Section VI.2 of document 11 C/48 not generally included in contracts for specific services.

Technical and Vocational Education

The National Commission believes that technical and vocational education should be an integral part of the total general education program.

NATURAL AND SOCIAL SCIENCES

Secretariat Organization for Development

The problems of development cannot be solved without an integrated attack on the educational, technical, and cultural front. Consequently, by virtue of its scope and charter, UNESCO is uniquely qualified to assist the less developed countries in achieving their aspirations for economic development. The U.S. National Com-

mission, in its advisory role to the State Department, believes that it is clearly in the interest of the United States to insure that UNESCO can play its proper role in international development.

The U.S. National Commission agrees with the Director General that at the present time UNESCO is not administratively equipped to undertake these tasks. We believe that reorganization along the following lines would improve UNESCO's organization and be a first step towards full utilization of its resources for development. There should be an Assistant Director General for Science who would have under his cognizance two basic science departments, one in the natural sciences and one in the social sciences, and a third department for the application of the natural and social sciences, together with other UNESCO resources, to the problems of development.

The Department of Development should have authority to draw support from all departments of UNESCO in furtherance of the goal for meeting the aspirations of the less developed countries.

Regardless of the particular details of organization the fundamental principle of an integrated approach to the problems of development and the high priority of such activity within UNESCO must be recognized.

Institute for Research Analysis

The National Commission recommends the establishment under the aegis of UNESCO of an Institute for Resource Analysis. The objective of such an institute would be to help the underdeveloped countries in the tasks of identifying, formulating and analyzing their national or regional problems of resources utilization and development. Systematic analyses involving consideration of the interactions between natural and human resources, social and political structures, and cultural traditions are a prerequisite to national development planning and programing, and are needed as a basis for international investment in development of the less developed countries. Such analyses will usually require cooperative studies and joint thinking by economists, sociologists or anthropologists, engineers, natural scientists, educators, and specialists in communications and specialists in systems analysis.

The Institute would have three functions. It would identify and formulate specific resource development problems in the less developed countries and would perform multi-disciplinary analyses of these problems. It would serve as a clearinghouse for information on resource development technology, including the social and cutural aspects, and it would provide training in methods of analysis and research on these problems.

In carrying out these functions, the Institute should emphasize an experimental approach to the problems of innovation and communication involved in the introduction and adaptation of technology. The Institute would be under the aegis of UNESCO, and at least the main component of its headquarters staff would be provided by UNESCO. It is estimated that for the first 2 years support of this headquarters staff would involve an expenditure by UNESCO of about $250,000 per year or $500,000 for the 1965–66 biennium.

The principal expenditures of the Institute, perhaps amounting to several million dollars per year, would be through grants or contracts with universities and research organizations having competence in interdisciplinary analyses. The headquarters staff, working with representatives of the member governments, would select the

organizations to undertake particular tasks and would monitor, review, and attempt to insure the comprehensiveness, of the analyses.

Funds for contracts would be provided by the member governments in which the contracting universities or research institutes are located in the same manner as the individual governments support their own participation in the programs of the Intergovernmental Oceanographic Commission. The Institute for Resources Analysis would be somewhat analogous in its mode of operation to the International Institute for Educational Planning. Its programs would be laid out and agreed to by the member governments adhering to the Institute, and would be reviewed by the General Conference of UNESCO.

Criteria for UNESCO Science Activities

The National Commission recommends that the following criteria should be applied in making decisions to add new activities or to continue existing activities in the natural sciences program. These criteria may also be of some value to the other parts of UNESCO. Not all of these criteria have to be applied in every case, but they should all apply to the maximum feasible extent.

First, UNESCO activities should have merit, measured either by intrinsic scientific value or by relevance to the development of the less developed countries.

Second, where possible, they should be of an interdisciplinary character involving relations between fields, either (a) between different scientific disciplines or (b) between different aspects of intellectual life.

Third, projects should be those in which intergovernmental cooperation is required, especially in areas where the advancement of science depends upon the joint action of countries having different political, economic or social systems.

Fourth, UNESCO scientific activities should take into account the spheres of interest of other United Nations agencies.

Fifth, administrative capability in the subject area should exist in UNESCO, or should be provided.

Documentation in Science and Technology

Scientific and technological information is basic to education, research and development. This premise should be kept clearly in view in strengthening science and technology in less developed countries.

The established, traditional information systems, that is, the library, the abstracting and indexing services, of the developed countries are having difficulties in keeping abreast of the rapidly growing mass of scientific and technological literature. One result is that the scientist of the developed country may have only limited access to the new knowledge produced in his field.

In many fields, the scientists and technologists have not exercised adequate leadership in the solution of problems indicated by these first two statements, that is, problems of development and the problems of the scientists having access to information in the developed countries. One result of this is that librarians and documentalists have not had the aid from scientists and technologists that they need in their efforts to solve these problems.

The established UNESCO program in this field is oriented primarily toward the study of technical library and documentation problems and toward support of activities of general interest to librarians and documentalists. Continued study of such problems is useful. But the urgent need is for action programs that will deliver primary scientific and technical liter-

ature to individuals and organizations needing it.

The National Commission believes that the UNESCO staff should assume appropriate leadership in resolving problems relating to scientific and technical information, such problems as those posed by the U.N. Conference on the Application of Science and Technology for the Benefit of Less Developed Areas, as well as by the member countries and the nongovernmental organizations in science and documentation.

In light of these premises, the National Commission makes the following recommendations:

1. UNESCO because of its broad membership and widespread field offices is in a unique position to assist less developed countries in establishing information services in science and technology. Specifically with regard to the improvement of scientific documentation, the reports that have already been made by working parties—primarily scientific publications, abstracting and indexing periodicals and services, scientific translations and terminology, mechanization and coding in scientific documentation—should be reviewed by a panel of scientists and technologists charged with the responsibility of evaluation from the viewpoint of improved services to education in science, scientific research and technology. As specific problems are formulated, additional working groups should be created;

2. UNESCO should work closely with the International Council of Scientific Unions in identifying the information needs of scientists and technologists in both the developed and less developed countries in suggesting problems involved in meeting the needs;

3. UNESCO should refer emerging science information problems of an international character to the International Federation of Documentation, the International Federation of Library Associations, and the International Standards Organization. Maximum effort on the part of UNESCO must be expended to avoid diffusion and overlap of responsibility for problem solving and action programs. Particular emphasis should be placed on the barriers inhibiting the flow of literature, for example, copyright, currency, censorship barriers.

Second, the National Commission is concerned with coordination of scientific documentation at the national levels in less developed countries.

The Field Science Cooperation Officer should be given increased responsibility for the identification of needs for information and the recommendation of services to satisfy the needs of the less developed countries.

Third, in regard to assistance to member states in scientific documentation, much perspective on the problems of providing information to member countries may be gained by a review of the problems faced by established national centers such as Pakistan National Documentation Center (PANSDOC) and Indian National Documentation Center (INSDOC). UNESCO should initiate an intensive, short-range study by a group of scientists and technologists, based on a review of these problems.

Many mechanisms for providing the less developed countries with scientific and technological information from the world literature are available. Study of the most appropriate measures applicable to countries of different degrees of development should be made. UNESCO may wish to establish and operate experimental centers. Cooperation of the International Federation of Documentation, the Inter-

national Federation of Library Associations, and the International Council of Scientific Unions should be solicited.

The problems should be focused on the further development and expansion of programs that permit the scientist and technologist to keep abreast of scientific advance, to identify the documents required and to procure these documents. The whole thrust of all of these recommendations is to focus on the problems of the working scientist and technologist as opposed to the problems of the librarians. The present program for providing aid in the establishment of documentation centers should be expanded where shown to be desirable. UNESCO should, however, insist upon strong assurance that national support of the documentation center will be continued. Increased emphasis must be placed on the need for continuing services by UNESCO through the documentation centers established in member countries and regional cooperation between such centers.

Other alternatives for delivering information to the less developed countries must be developed. Such concepts as the following should be explored: Provision of core journals and associated services for delivery of documents; provision of core libraries of books, in microform where necessary, and a service for maintaining such libraries; and the establishment of improved international services to expedite delivery of documents, on request. In many cases, these may be made in microform.

Science Program Adjustments

On the basis of the criteria set forth above and following analysis of the present natural sciences program, but without prejudice to such conclusions as the National Commission may reach later in regard to the findings of any task force which the Executive Board may establish to consider the application of science and economic development, the National Commission recommends that the 1965–66 UNESCO program in natural sciences should be funded at a level of approximately $6 million, or approximately $1,650,000 more than the present level.

Specifically, the National Commission recommends increases about as follows: the international program in hydrology, $110,000; seismology and atmospheric sciences, $300,000; oceanography, $100,000; documentation, $160,000; science education, $200,000; science cooperation offices. $100,000.

Funds should be earmarked for new items as follows: $60,000 for support of the International Biological Program; $500,000 for new activities which might be considered in relation to a Department for Development; and $500,000 for administrative costs to be borne in the event of the establishment of an Institute of Natural Resources Analysis.

The National Commission recommends the following decreases: support for the program in cell biology and brain research should be transferred to the national committees as soon as possible. This would take about a 3-year period; in the meantime UNESCO should continue its support at about half the existing level—a decrease of $80,000. The space science program should be confined to support of the activities of COSPAR, resulting in the decrease of about $90,000. Assuming replacement by new activities in either a Department of Development or an Institute of Natural Resources Analysis, there should be a decrease of $70,000 in the Science policy budget and $30,000 in the aid to technological research. For the Arid Zone and Humid Tropics Program, there should be a decrease of $100,000.

These increases and decreases constitute a net increase of $1,660,000.

Subventions to Nongovernmental Organizations

For the sciences to be viable and productive, the cooperative effort of many nations in the extension of knowledge and the development of its applications requires the existence of mechanisms for the coordination of efforts within the international scientific community. UNESCO was established with foresight and imagination, as an appropriate vehicle for the collaborative effort of the governments of nations. In varying degrees of maturity, the international associations of physical, biological, and social sciences exist as such mechanisms within the private sector. The National Commission considers it to be essential that these associations be supported in a manner which will permit them to achieve a real partnership of effort with the intergovernmental agencies. This support is provided, for the most part, as contributions of individual nations through their national academies or learned societies or, alternatively, through multilateral subventions from UNESCO.

Recognizing that long tradition favors the former in the case of the natural sciences, that is, the national academies or learned societies, but that current necessity dictates the latter in the case of the more recently developed social sciences, that is, the UNESCO subvention, the National Commission believes that the desirable degree of unification among all sciences will be achieved most effectively by insuring a stable and continuing source of support for international scientific organizations through subventions as required for effective functioning by UNESCO.

Accordingly, the National Commission strongly urges that the United States adopt a position in support of these subventions by UNESCO as an integral and essential obligation continuing into the foreseeable future.

Survey of Research Trends in Social and Human Sciences

The National Commission does not offer any recommendations on this subject at this time. In the absence of adequate background information, Commission members participating in a discussion of this subject felt that the only thing that could be done at this time was to delay further action with the idea of watching closely what may develop along these lines.

CULTURAL ACTIVITIES

Decade of Development: Relationship to Cultural Activities

The National Commission is concerned about the lack of a clear definition of the term "Decade of Development" and regrets the almost complete neglect of cultural and spiritual factors in the existing documentation on this subject. The National Commission felt that in connection with the evolution of new nations UNESCO should try to cultivate a feeling of mutual appreciation both between developed and newly developing nations. This can be achieved through interest in and attention to the history and heritage of these nations and through further development by each new nation of its own image.

Recognizing that a great deal of the cultural activities in the Development program would naturally fall into the field of education, the National Commission recommends that educational materials be based on and appropriately reflect the national heritage of the user country.

The National Commission believes that the emphasis on the Decade of Development should not and does not mean the abandonment of the basic purpose of UNESCO—namely, to promote better international understanding through cultural exchanges. In this context, the National Commission recommends that more funds be assigned to the International Roundtable Discussions.

Subventions to Nongovernmental Organizations (NGO)

The National Commission urges the Department of State—

1. To support the practice of granting subventions to international nongovernmental cultural organizations when it is clear that needed funds are not available to these organizations from other sources, and where organizations concerned have provided proper justification for their requests.

2. To request beneficiary organizations to make every effort gradually to increase their own share in the financing of the activities for which UNESCO has granted a subvention, and to present evidence of such efforts and the results thereof.

The National Commission believes that these organizations are serving a very useful purpose in the promotion of international mutual understanding, that the work done by these organizations would not be carried out did they not exist unless UNESCO undertook to do so itself, and that this work can be accomplished more economically by the nongovernmental organizations under the present arrangement than if their activities were to be taken over by UNESCO itself. It was felt that UNESCO might well examine the Category A and Category B lists of organizations having consultative status with a view to possible additions or in some instances increases of subventions.

Third Major Project

In view of the impending completion in 1966 of the 10-year Major Project on Mutual Appreciation Between the Orient and the Occident, the National Commission urges that UNESCO provide in the 1965–66 program for careful phasing out of the project so as to insure continuation of those aspects of it which can usefully be incorporated in the regular cultural activities program. (The Commission has initiated steps for further specific examination of this problem and may submit supplementary recommendations at a later date.)

Modern Design and Traditional Style

The National Commission considered the desirability of UNESCO providing more stimulation and guidance to underdeveloped countries in utilizing the competences of artists, craftsmen, architects, and designers to create plans and construct buildings which are modern and functional but yet preserve the local elements associated with the traditional national style. Included also is the emphasis on design of interiors, furniture, book design, graphic arts, painting and industrial design. In this connection, the National Commission recommends:

1. That the United Nations be requested to take these factors into account in its programs of community development;

2. That UNESCO do the same in its program of giving advice to member states in educational buildings, including libraries and museums; and

3. That UNESCO prepare itself to respond to requests from the United Nations for aid in performing its community development role referred to in item 1 above,

by strengthening the staff of its Secretariat and by fostering development of the capacity of appropriate NGO's for such activity.

MASS COMMUNICATIONS

Development of Information Media

The National Commission reaffirms its belief in the great promise of the mass media to speed educational growth and to extend the benefits of knowledge and skill to millions of people in developing nations, thereby enabling them to move out of a traditional society and to participate effectively in a modern world. In this connection, it notes with satisfaction the action of the U.N. General Assembly in recognizing information media development as a necessity for economic growth, and, as such, an essential goal of the U.N. Development Decade.

In line with the General Assembly's action, the National Commission commends the special emphasis which UNESCO is giving currently to the development of information media and recommends that the Director General support a substantially increased budget request to assist in the development of adequate information facilities in Asia, Africa, and Latin America.

The recent UNESCO survey of the needs of underdeveloped countries for information media development reveals that 70 percent of the world's population lacks minimum standards of access to information facilities.

The National Commission, taking note of this appalling deficiency affecting some two billion of the world's people, urges increased effort by UNESCO to help these member nations develop their facilities in all the mass media, but with particular emphasis on radio and television, which have the potential to teach more things to more people in less time than all other devices.

The effect of underdeveloped information channels is to isolate a population so that its members are virtually unaware of the outside world. In this connection the National Commission commends the facilitation conference conducted by UNESCO in Bangkok and recently in Tunis to foster development of news agencies in Asia and Africa. As outcomes of these meetings, decisions were made to form associations of the news agencies in these countries for the purposes of promoting professional and technical cooperation among the news agencies in the country and to increase the flow of information within the countries and the region as well as to and from the world at large.

There is overwhelming evidence to indicate that investment in communication facilities for underdeveloped countries will ultimately increase the value of all other development investments. Nevertheless, the initial capital outlay for such communication systems is often large and frequently beyond the capacity of many nations to finance. This means that if UNESCO is able, through its various activities, to quicken the pace of acceptance of the new media in the emerging countries, their national efforts must be augmented with international aid.

UNESCO resources, even though vastly increased allocations for this purpose be made, can never be adequate to meet the needs for media development. Taking note of this situation, the National Commission suggests that UNESCO should make a greater effort to explore methods for low-cost financing of private or semi-private media facilities. Efforts should be made for cooperation with the business and industry communities, for the greater

involvement in helping to establish media facilities and in the employment of commercial facilities where they exist in these countries in the support of the UNESCO program.

Observing the manifold but inadequately financed activities in which the Department of Mass Communications is now engaged, the National Commission expresses concern regarding the possible dangers of spreading resources too thinly in the proliferation of projects, and recommends greater concentration of efforts in a limited number of activities in this field. In this way, modest resources can achieve greater thrust and accomplish more significant gains.

Media Technology for Educational Purposes

As an example of this approach, the National Commission strongly recommends that UNESCO take the leadership in establishing, in cooperation with foundations, member states, educational organizations and so on, a one-country comprehensive pilot project which would thoroughly test the application of educational technology in that country's developmental program. Such a project would call for a total involvement of the media in the formal and informal educational system and fully utilize in an integrated system the media resources of slides, films, tapes, records, printed materials, graphics, radio, and television to support and strengthen traditional methods of instruction.

Such a national field laboratory would test new educational techniques, new equipment, and various training methods in relation to the media in an effort to determine which methods and means can be best adapted to particular circumstances and situations. Accordingly the project would include a thorough program of research and evaluation, including careful cost accounting.

An all-out test of this nature, embodying complete involvement of the media in an educational program of a representative undeveloped nation, would afford a model from which a body of knowledge could be derived which would have general application for the development of the media in other emerging nations through the transfer of experience to like or similar circumstances in other areas.

In order to derive the greatest utility from such information for UNESCO and for the cooperating agencies, the empirical findings and expert judgments relative to the educational, engineering, logistical, and economic phases of this experiment would be made available on a continuing basis. The information deriving from this project, would, perhaps, for the first time, make possible a coherent policy and program of technical educational aid investment in developing nations.

Satellite Communications

The National Commission approves the decision of UNESCO to convene a meeting in Paris on the educational implications of satellite communications and urges that it persevere in efforts to insure that television and radio transmissions via such satellites include adequate provisions for educational, cultural, and scientific programs.

At the same time that it recognizes the potential significance of communication satellites for advancing the free flow of information around the world and the possibility of drawing the cultures of the world closer together in a global communications net, the National Commission wishes to point out that there are dangers in promoting or allowing to develop naive notions about satellite uses which are

quite divorced from reality. Though we may ultimately achieve a global communication system, this is far in the future and must be preceded by a tremendous program of research and development, for there are vast problems to be resolved in the economics, technology, organization and utilization of satellite communications.

It is unlikely, for example, that man's ancient dream of universal education can be brought about through unlimited educational transmission over a worldwide system of satellite communications.

Uninformed expectations of satellite uses in education must not be allowed to delay or disrupt the orderly evolution and development of conventional communication systems in the service of education—systems which satellite communications by no means make obsolete. A jet airplane carrying video tape for delayed broadcast on another continent can compete in timeliness with direct satellite telecasts, which often would arrive at inappropriate times for reception and would thus have to be stored for delayed rebroadcast or delayed for translation into another language. Moreover, reception on home receivers would depend for many, many years upon relay systems of conventional ground-based radio and television facilities.

Communication satellites fire the imagination; they are exciting, and they are glamorous, but they offer no swift easy way to wipe out ignorance on a global scale and achieve world literacy. In the distant future they may have some practical educational applications, but meanwhile UNESCO is well advised, in the National Commission's judgment, to concentrate on understanding how to use our present communications technology and in helping underdeveloped areas of the world establish their own communications systems as a solid base for achieving national literacy and educational development.

Report on UNESCO Publications

The Commission agreed with the Acting Director General that (1) publications constitute one of the most important aspects of UNESCO's work, and (2) that a statement of policy governing publications should be adopted by the General Conference.

After careful study, the Commission made the following recommendations for consideration in formulating such a policy directive:

1. UNESCO should publish in fields which are clearly within its scope and competence and where the publication contributes to the attainment of the objectives of UNESCO.

2. Abusive or biased statements should be avoided and the normal rules of objective and judicious writing should prevail in all of UNESCO's publications.

3. Authorship of all publications other than official position statements should be clearly stated and individual authors should be recognized competent in their field.

4. Careful distinction should be made, by format and by specific disclaimer between publications presenting official positions to which UNESCO is formally committed and publications reporting conference or committee discussions or individual statements or documents with which UNESCO is not necessarily in agreement.

5. UNESCO should use in its tabulations the best statistical data from any sources available to UNESCO and should continue its outstanding work in the development of fact-gathering and fact-handling procedures. The sources of data used in any publication should be clearly indicated.

6. UNESCO should set up an advisory board within the Secretariat, directly responsible to the Director General, and made up of the heads of all departments concerned with publications. The primary purpose of such a board will be to make sure that manuscripts submitted to it meet the above criteria or should be rejected or reviewed. The secondary purpose of the board will be to advise the Director General on the general scope and nature of the publications program as a whole.

The Commission considered and rejected proposals for an automatic review board and a general editor, as well as any board that would operate independently of the Director General.

The Commission recognized that while in some cases, a useful distinction could be made between publications of facts (such as statistical studies) and publications of ideas which argue a point of view, this distinction is at best tenuous in some publications. The Commission felt, for instance, that the mere selection of certain facts and the omission of others reflects a point of view. On the other hand the Commission felt that conflicting views should be presented in a scholarly and objective way on the same basis as statistics can be.

APPENDIX III

U.S. National Commission for UNESCO Membership

(As of October 1, 1963)

GEORGE V. ALLEN ..... *Chairman*

FREDERICK H. BURKHARDT
MRS. HAROLD C. CASE
ROGER REVELLE
..... *Vice Chairmen*

L. A. MINNICH ..... *Executive Secretary*

ROSTER OF MEMBERS

Organization represented, or the category of membership, is indicated following each individual's name.

GEORGE V. ALLEN, Member at Large
ELLIS ARNALL, Member at Large
WILLIAM AYRES, Federal Government
WILLIAM BENTON, Federal Government
MRS. BARRY BINGHAM, Member at Large
MAURICE BISGYER, B'nai B'rith
KENNETH E. BOULDING, American Economic Association
PAUL J. BRAISTED, Member at Large
HARVIE BRANSCOMB, American Council on Education
KNUTE O. BROADY, National University Extension Association
BEN BRODINSKY, Educational Press Association of America
ELLSWORTH BUNKER, Asia Society
FREDERICK BURKHARDT, American Council of Learned Societies
FRED R. CAGLE, American Institute of Biological Sciences
MRS. LISLE C. CARTER, National Council of Negro Women
MRS. HAROLD C. CASE, National Council of Women of the U.S.
KENNETH W. CLARK, Motion Picture Association of America
H. WALTON CLOKE, Public Relations Society of America
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FARRINGTON DANIELS, National Academy of Sciences–National Research Council
HERBERT E. EVANS, National Association of Broadcasters
LUTHER H. EVANS, State and Local Governments
HUBERT V. EVERLY, State and Local Governments
JOHN H. FISHER, Modern Language Association of America
RALPH H. GABRIEL, Member at Large
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LYMAN V. GINGER, National Education Association
MARCUS GINSBURG, American Jewish Congress
HARRY GOLDBERG, AFL–CIO
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ERNEST S. GRIFFITH, National Council of the Churches of Christ
WAYNE C. GROVER, Federal Government
JOHN W. HALL, Association for Asian Studies
WILLIAM G. HARLEY, National Association of Educational Broadcasters
GILBERT V. HARTKE, American Educational Theatre Association
L. ROY HAWES, National Grange
ANNA L. ROSE HAWKES, American Association of University Women
AUGUST HECKSCHER, Member at Large
RICHARD H. HEINDEL, Member at Large
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BARRETT HOLLISTER, American Friends Service Committee
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HENRY R. HOPE, State and Local Governments
CYRIL O. HOULE, Adult Education Association of the U.S.A.
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ELMER HUTCHISSON, American Institute of Physics
EUGENE H. JACOBSON, American Psychological Association
MRS. CLIFFORD N. JENKINS, National Congress of Parents and Teachers
BARBARA G. JOHNSON, Association of the Junior Leagues of America
JED J. JOHNSON, JR., Collegiate Council for the United Nations
WILLARD JOHNSON, United States National Student Association
HOWARD L. KANY, Chamber of Commerce of the U.S.
LEONARD S. KENWORTHY, Association for Supervision and Curriculum Development
FRANCIS KEPPEL, Federal Government
CLYDE F. KOHN, Association of American Geographers
T. A. LARSON, State and Local Governments
RAYMOND F. MCCOY, National Catholic Educational Association
GALE W. MCGEE, Federal Government
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THOMAS F. MALONE, American Geophysical Union
JULIUS MARK, Synagogue Council of America
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GREGG M. SINCLAIR, State and Local Governments
LAWRENCE M. C. SMITH, State and Local Governments
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